

**DREXEL UNIVERSITY
DEPARTMENT OF CHEMISTRY
2006-2007 SEMINAR SPEAKERS AND TITLES**

(Presentations at various levels, depending on audience make-up)

Anthony W. Addison, Professor, Inorganic Chemistry

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1. "Coordination Chemistry Considerations in Oligonuclear and Biomimetic Systems"

Alan R. Bandy, R.S. Hanson Professor of Atmospheric Chemistry

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1. "Chemistry of the Atmospheric Oxidation of Organosulfur Compounds: Implications for Global Change."
2. "Nucleation and Growth of Sulfur-Containing Atmospheric Aerosols: Implications for Global Change."

Jean-Claude Bradley, Associate Professor, Supracolloidal Science & E-Learning Coordinator for the College of Arts & Sciences

Email: bradlejc@drexel.edu **Tel:** (215) 895-2647

1. "Applications of Bipolar Electrochemistry in Materials Science."
2. "SMIRP: Knowledge Management Using a Self-Evolving Database Structure-Applications in the Laboratory and in Education."
3. "Podcasting, Screencasting, Blogs and Games as Part of a Low Risk Strategy to the Production of Blended and Fully Online Classes."

Robert O. Hutchins, G.S. Sasin Professor of Organic Chemistry

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1. "Stereochemistry of Cyclic Carbon-nitrogen π -System Reductions."
2. "Enantio- and Diastereoselective Synthesis of Amines."

Daniel B. King, Assistant Professor, Chemical Education

Email: daniel.king@drexel.edu **Tel:** (215) 895-0571

1. "Integrating real-world data into the curriculum: Kicking lectures up a notch."
2. "Engaging Students in the Classroom: Is Technology the Answer?"
3. "Research in the Southern Ocean: Icebergs, Penguins, and Atmospheric Chemistry."

Kevin G. Owens, Associate Professor, Analytical Chemistry

Email: kevin.owens@drexel.edu **Tel:** (215) 895-2621

1. "Quantitative Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry: Fact or Fantasy? (or The 'Black-Art' of MALDI Sample Preparation)."
2. "Prospects and Problems in MALDI TOFMS" (The seminar can focus on either biological or synthetic polymer systems)."
3. "Informatics and Mass Spectrometry: Applying Correlation Analysis Techniques to Extract New Information from Mass Spectral Data."
4. "Monte Carlo Modeling and Instrument Development for Improving Time-of-Flight Mass Spectrometry."
5. "Analytical Calibration: What is the Best-Fit Line Through the Data (and What Do I Do Once I Have It)?"
6. "The Brave New World of Technology & Teaching: Where do we go from here?"

Lynn Penn, Professor, Materials Chemistry & Department Head

Email: lynn.s.penn@drexel.edu **Tel:** (215) 895-2638

1. "Penetration of Polymer Brushes by Free Chains."
2. "Polymer Brushes for Creating Surfaces of Controlled Structure and Technological Relevance."

Carey M. Rosenthal, Associate Professor, Physical Chemistry

Email: carey.rosenthal@drexel.edu **Tel:** (215) 895-2641

1. "High Dimensional Model Representations and Chemical Applications."

Reinhard Schweitzer-Stenner, Associate Professor, Physical Chemistry

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1. "Is the unfolded state of peptides and proteins really a random coil?."
2. "The structure of tri- and tetrapeptides in solution determined by combining IR, Raman and Vibrational Circular Dichroism Spectroscopy."
3. "Resonance Raman Dispersion Spectroscopy: A Tool to Probe Functionally Relevant Deformations of Porphyrins in Solution and in Protein Matrices."
4. "Probing different types of heme deformations in various cytochrome c mutants by resonance Raman and Low Temperature Absorption Spectroscopy."
5. "The Determinants of the Stimulatory Capacity of the Type I Fc γ Receptors on Mast Cells."

Karl Sohlberg, Associate Professor, Physical Chemistry

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1. "Design engineering tools for molecular gizmos."
2. "Breathing water and eating aluminum: The unusual chemistry of catalytic aluminas."
3. "Preserving the Symmetry in Approximate Hamiltonians from the Birkhoff-Gustavson Normal Form Procedure."

Sally Solomon, Professor, Materials in Chemical Education

Email: sallys@drexel.edu **Tel:** (215) 895-2642

1. "Artificial Intelligence: Intelligent Tutoring Systems for Chemistry."
2. "Demonstrations on the Overhead Projector (demonstration talk)."
3. "Demonstrations with a Collection of the Chemical Elements (demonstration talk)."
4. "Science in Motion (Transporting Instruments and Experiments to Secondary Schools)."

Peter A. Wade, Associate Professor, Organic Chemistry & Associate Department Head

Email: wadepa@drexel.edu **Tel:** (215) 895-2652

1. "Competing Diels-Alder Reactions and [2,3]-Sigmatropic Rearrangements: Different Ways of Getting to the Same Place."
2. "The Outer Limits of Nitro Compounds."
3. "The Curious Chemistry of Unsaturated α -Nitrosulfones."

Yen Wei, Herman B. Wagner Professor of Chemistry and Director, the Center for Advanced Polymers and Materials Chemistry

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1. "Plastics That Conduct Electricity - A Fascinating World of Polymers."
2. "Taming Enzymes: Immobilization of Proteins in Mesoporous Molecular Sieves."
3. "New Organic-Inorganic Hybrid Sol-Gel Materials and Their Biomedical Applications."